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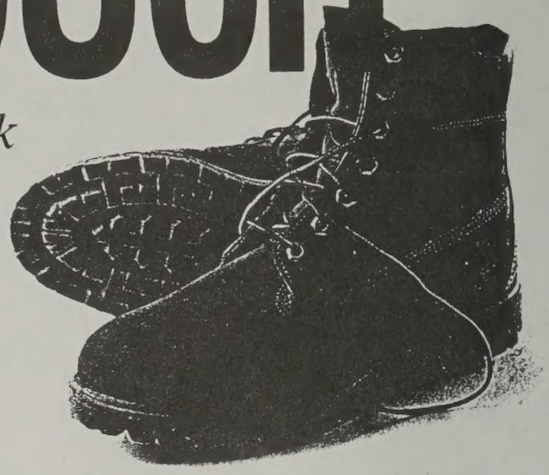

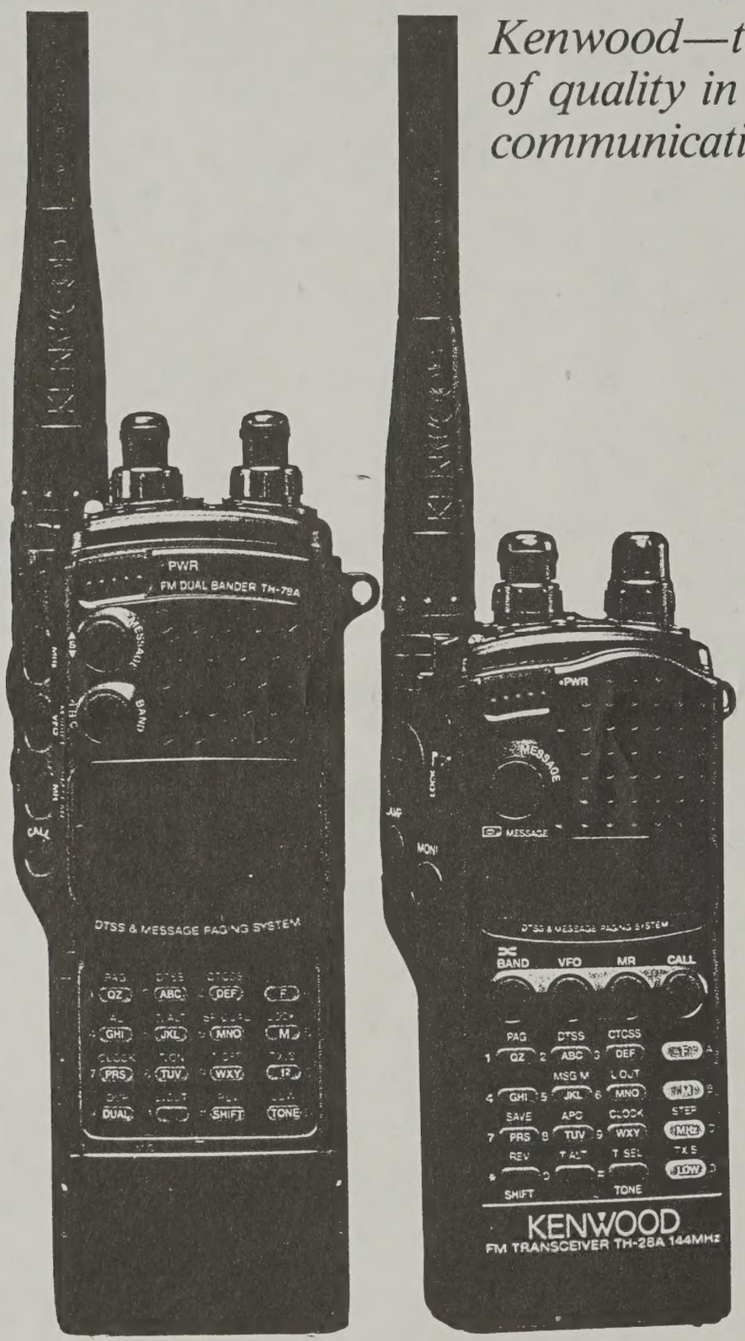

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QST CANADA

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ABOUT THE COVER

Roland C. Peddle, VO1BD/VO1QST, with CRRL certificates for volunteer services, at home in St.John's, Newfoundland (see page 4). ■

It Seems to Us.../Il nous semble...

It's a Small World

We have just returned from a great holiday in Newfoundland. Our last evening was spent visiting Roland Peddle, VO1BD, pictured on our cover this month after being honoured for his sterling service to CRRL and the radio amateurs of Newfounland over many years.

We took with us a QSL card from VO1D, Roly's former call, dated August 21, 1956, addressed to BERS 857 in Lagos, Nigeria, where your editor was then working for NBC—the Nigerian Broadcasting Corporation.

On arriving home in Ontario, a letter from Carl Anderson, VE1UU, CRRL's Atlantic Region Director, enclosed photographs of Roly. Carl announced his presentation of three certificates of appreciation to Roland C. Peddle, VO1BD/VO1QST. Please see page 4 of this issue for details.

Coincidences of this sort are commonplace on the air. Talking once to an amateur operator in Fiji, it turned out that we had both lived on the same road in a Sussex village. Here at home, we have astonished visitors several times. A neighbour who comes from Lancashire walked in the door just as we contacted someone in her former home town of Ramsbottom. An Irish couple were visiting from Toronto, and the first voice they heard coming over the radio was an EI from County Cork.

A fascination with Antarctica grew from a contact with the US scientific base at Siple. High-power VLF transmissions from there, radiated by a 13-mile long antenna, follow lines of the earth's magnetic field and are received at Roberval, Quebec, where they re-enter the earth.

Every day Amateur Radio is helping to show what a Small World we live in, by establishing friendships across frontiers and oceans. If only the peoples of Serbia and Croatia and other strife-torn countries would learn to live together as well.
—David Adams, VE3HBF ■

A Resounding "Yes" to Merger

CRRL and CARF members, in a Canada-wide secret ballot, have given their unequivocal approval to dissolve their organizations and hand over their assets and responsibilities to the newly formed

Radio Amateurs of Canada/Radio Amateurs du Canada (RAC).

The vote by CRRL members was 97 per cent in favour.
The vote by CARF members was 92 per cent in favour.

CARF and CRRL have agreed on an interim Executive for RAC, drawn from among officers and directors of both organizations.

Executive Officers:		
President	Farrell Hopwood	VE7RD
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Midwest	Bob Shehyn	VE5FY
Ontario North	Bob Bishop	VE3JAB
Ontario South	George Gorsline	VE3YV
Quebec	Jean-Guy Riverin	VE2JGR
Atlantic	Carl Anderson	VE1UU

The first organizational planning meeting of the RAC Executive is scheduled for October 3, 1992, in Cobourg, Ontario. ■

Ottawa Notebook

Conducted by Ray Perrin, VE3FN

MINISTER ADDRESSES CANADIAN AMATEURS ON VY9CC

Federal Minister of Communications Perrin Beatty went on the air on Monday, June 29, 1992, to address Canadian amateurs. For this important event, VY9CC, the Amateur Radio station located in the Department of Communications Headquarters building at 300 Slater Street, Ottawa, was temporarily set up in the Minister's boardroom on the 20th floor.

I was invited to attend on behalf of CRRL, and Dan Holmes, VE3EBI, participated for CARF. We were joined by several amateurs employed by DOC: Hugh Clark, VE3WM; Bob Jones, VE3CTM; Jim Cummings, VE3XJ; and Michael Milot, VE2ALK. John R. (Rusty) Baird and Marie-Christine Dufour of the Minister's staff also attended.

The Minister arrived well before eight o'clock, the time scheduled to go on the air. He had time to be introduced, to look over the equipment, and to ask questions. I immediately sensed that he was a warm person, sensitive to his constituents and to radio amateurs. He was genuinely interested in the technology, and having attended Field Day at a site in his constituency last year, was no stranger to Amateur Radio.

At eight o'clock, following an introduction by Hugh Clark, VE3WM, on 3775 kHz, the Minister transmitted his message. It was well received. After listening to replies, we moved up to 3780 kHz where the Minister gave his address in French, following an introduction by Michel Milot, VE2ALK.

The Minister then spoke to a wide audience via dozens of VHF and UHF repeaters, linked through the satellite and terrestrial channels of the IPARN network. We experienced a few rough edges, but the IPARN network performed very well. At the end of the exercise, Jim Cummings, VE3XJ, demonstrated packet radio, and established packet connections through terrestrial and satellite facilities.

During the evening the group also had an informal chat. It was especially pleasing to be able to tell the Minister and his staff a little more about many facets of Amateur Radio. I pointed out that, while Amateur Radio is an interesting hobby, and amateurs' services in providing emergency communications were well known, operating an amateur station was also educational. Whether one was rag-chewing, chasing DX or operating packet, one could not help but learn about radio equipment and propagation. I also mentioned experiments that we conduct on our VHF and UHF bands into more exotic modes of propagation, such as meteor scatter, auroral scatter and even moonbounce. The interest shown by the Minister and his staff was evident from their questions.

My thanks go to the Minister and his staff for participating in the evening's activities. Thanks also to the amateurs at DOC who made all the arrangements, and conducted a most successful evening. The efforts of the amateurs who controlled the IPARN facilities and made them available were also appreciated. Finally, my thanks to all those amateurs "on the outside" who took part in the evening's activities—especially those in the Minister's constituency. They added a personal touch to the event. *—Ray Perrin, VE3FN, CRRL Director, Ontario North* ■

The Canadian Radio Relay League, Inc
La Ligue Canadienne de la Radio Amateur, Inc

The Canadian Radio Relay League (CRRL) is a noncommercial association of radio amateurs organized for the promotion of Amateur Radio communications and experimentation, for the establishment of networks to provide communications in the event of disasters or other emergencies, for the advancement of the radio art and the public welfare, for the representation of radio amateurs in legislative and other matters, and for the maintenance of fraternalism and a high standard of conduct.

CRRL is incorporated under the Canada Corporations Act. Its affairs are governed by a seven-member Board of Directors elected every two years by the CRRL general membership. CRRL is noncommercial, and no one who could gain financially by the shaping of its affairs is eligible for membership on its Board.

CRRL is the Canadian member-society of the International Amateur Radio Union (IARU). "Of, by and for the Canadian Radio Amateur", CRRL numbers within its ranks the vast majority of active amateurs in the nation and has a proud history of achievement in amateur affairs.

A bona fide interest in Amateur Radio is the only essential requirement for membership. An Amateur Radio licence is not required, although full voting membership is granted only to licensed amateurs in Canada.

Membership inquiries and general correspondence should be directed to CRRL Headquarters, Box 56, Arva, ON N0M 1C0 Tel (519) 660-1200.

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*Voting member, CRRL Board of Directors

October Contests

CRRL Fall Sprints
October 12, 1900–2300 local time:
144 MHz
October 24, 1000–0000 UTC:
50 MHz

Scouts' Jamboree-on-the-Air (JOTA)
October 17–18

CQ Worldwide SSB DX Contest
October 24–25

Algoma ARC Salutes Kimball

Walter Kimball, VE3CWE: 60 years of Amateur Radio activity...

By Brent MacMillan, VE3OTL
24 Westgate Drive
Sault Ste-Marie, ON P6C 2X3

We all pride ourselves on the length of time we have been involved in this wonderful hobby, but few can boast the years of service that Walter Kimball, VE3CWE, has devoted to Amateur Radio.

On March 16, 1992, the Algoma Radio Club presented Walt with a plaque commemorating 60 years of Amateur Radio activity.

Back in 1932, Walt was a strapping lad of 16, living in Washington, DC. He saw an ad in *Boy's Life*, the magazine of the Boy Scouts, about an exciting new hobby called ham radio. Walt was keen to get started, so he wrote to the ARRL for the brochure mentioned in their advertisement. Walt found a theory manual, and borrowed a paper tape code machine from a school mate. Punched paper went over a set of contacts, and with a little built-in oscillator, produced Morse code. Studying hard on his own, Walt was able to get his licence and his first call, W3CWE.

Walt didn't get on the air right away, due to lack of equipment. Walt built a homebrew receiver, and listened to radio activity. Almost all the gear hams were using back then was homebuilt. There were a couple of commercially built receivers available, but, as Walt put it: "Who could afford them?" Walt's first QSO was in 1933 using a transmitter employing a TNT circuit using a 245 tube. If you really pushed it, you could get about five watts out. It wasn't all that stable, and you could drift 10 kHZ while working someone as the transmitter warmed up. But that just added to the excitement of the QSO. Walt put up a 40-metre centre-fed doublet, one end tied to a 30-foot mast on his parents' three-storey house, the other end tied to a 20-foot mast mounted on the ground. The doublet sloped towards Europe.

Walt's second rig was a crystal controlled set using a 247 oscillator and a 46 amplifier. It was built from plans in *QST*, and would deliver 15 to 20 watts of RF to hop across the pond to Europe.

After graduating from high school, Walt attended Catholic University in Washington, majoring in chemical engineering. Unfortunately, the program was cancelled in the second year as there were only three students enrolled. Walt switched to metallurgy at Michigan Tech.

Walt continued to stay active in Amateur Radio. One of his schoolmates who boarded at the house where Walt lived was an amateur, and had brought along a rig. He and Walt had to limit their operation to daylight hours, as their neighbours' lights would suddenly get brighter when they transmitted!

Walter Kimball, VE3CWE, in his shack in Sault Ste-Marie, Ontario, was honoured by his friends in Algoma ARC on completing 60 years in Amateur Radio.

Michigan Tech had a kilowatt club station, W9YX. Back then, the upper part of Michigan was in the ninth call area. Walt because custodian of the station in his final year.

Walt graduated in 1937. He started working for US Steel in June, but was laid off in September due to a slowdown in the steel industry. That was when Walt got a tip from a former classmate at Michigan Tech that they were hiring metallurgists in Sudbury. He made the trip north. He stopped off in Sault Ste-Marie to see a school friend and decided, on a lark, to see if Algoma Steel was hiring. Walt never made the trip to Sudbury, as he was hired by Algoma.

Walt settled down in Sault Ste-Marie but didn't have any radio gear. He had left that at his parents' home. He did locate a small shortwave receiver so he could keep up his code practice. Not long after taking up residence in the Sault, he met his future wife, Olive. Wedding bells rang.

In 1941, the US officially entered World War 2. Walt's father wrote to tell him that an official from the US Army had been by to check Walt's radio gear. As his equipment was all homebrew, it wasn't needed by the government, but the official took down Walt's antenna before he left, to ensure that the radio could not be used.

In 1942 Walt joined the US Navy which, in its infinite wisdom, didn't use his radio abilities, but trained him as a torpedo specialist instead. Walt served in his new trade very successfully. His first posting was as an instructor in San Diego. Later he saw action aboard a submarine tender. His off-duty hours found him copying code from news press stations on one of the big Hallicrafters receivers in the ship's radio room.

The end of the war in 1945 found Walt in Pearl Harbour, Hawaii. He sailed back to New Orleans, and later was discharged in New York. After his discharge, Walt returned to Sault Ste-Marie and his job at Algoma Steel. Shortly after he got back,

Algoma—continued on page 15

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Newfoundland Amateurs Honoured

ROLAND PEDDLE, VO1BD/VO1QST

This month's cover photo shows Roland Peddle, "Roly", VO1BD/VO1QST of St. John's, Newfoundland, with three awards for many years of service as a CRRL volunteer. They were presented on behalf of CRRL by CRRL Atlantic Region Director Carl Anderson, VE1UU, on July 15, 1992. The awards—all certificates—recognize Roly's service as:

1) Assistant Director, Atlantic Region, since 1987,

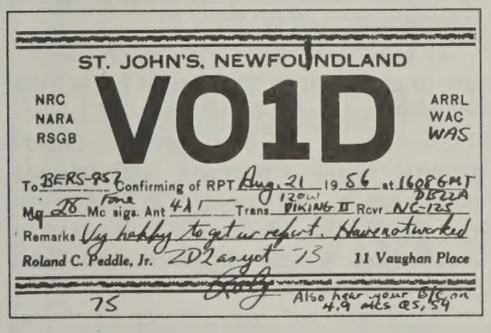
2) CRRL Official Bulletin Station, VO1QST, since 1987, and

3) VO1/VO2 QSL Bureau Manager since 1984.

As manager of the CRRL VO Incoming QSL Bureau, Roly has distributed over 200,000 QSL cards to amateurs in Newfoundland and Labrador.

Roly was first licenced in January, 1952, as VO1D. In 1957, Newfoundland and Labrador callsigns were reorganized, and he was given the call VO1BD. Roly's wife, Barbara, also holds a licence. She is VO1BC. Roly has been an ARRL and CRRL member for some 40 years.

QST Canada Editor David Adams, VE3HBF, spent a pleasant evening at Roly's home in late August, and was vastly impressed with the efficiency of the VO QSL Bureau. The QSL card below was received by *QST Canada* Editor David Adams, an SWL in Nigeria in 1956, almost exctly 36 years ago when Roly still had his single-letter call.


ST. JOHN'S, NEWFOUNDLAND

NRC NARA RSGB **VO1D** ARRL WAC WAS

To BERS-957 Confirming of RPT Aug. 21 1956 at 1608 GMT

Mg 28 Mc sigs. Ant 4A1 Trans. VIKING II Rcvr NC-125

Remarks Vy hobby to get verified. Have not worked

Roland C. Peddle, Jr. 202 as yet 75 11 Vaughan Place

75 Also hear your OTC on 4.9 mcs @5:59

Be sure to look for Roly as VO1QST in CRRL's annual Fall QST QSO Award Party, scheduled to take place at 0000–2400 UTC on 1992 November 8. To earn a *Worked QST Award*, contact any eight of the twelve QST-suffix stations that will be operating just above 3.75, 7.05, 14.11 or 21.25 MHz. To receive your *Worked QST Award*, send a copy of your log along with an SASE or one IRC to CRRL Awards Manager David Noon, VE3IAE, 19 Honeysuckle Crescent, London, ON N5Y 4P3.

GORDON GOSSE, VO1CU, EARNS SPECIAL COMMENDATION

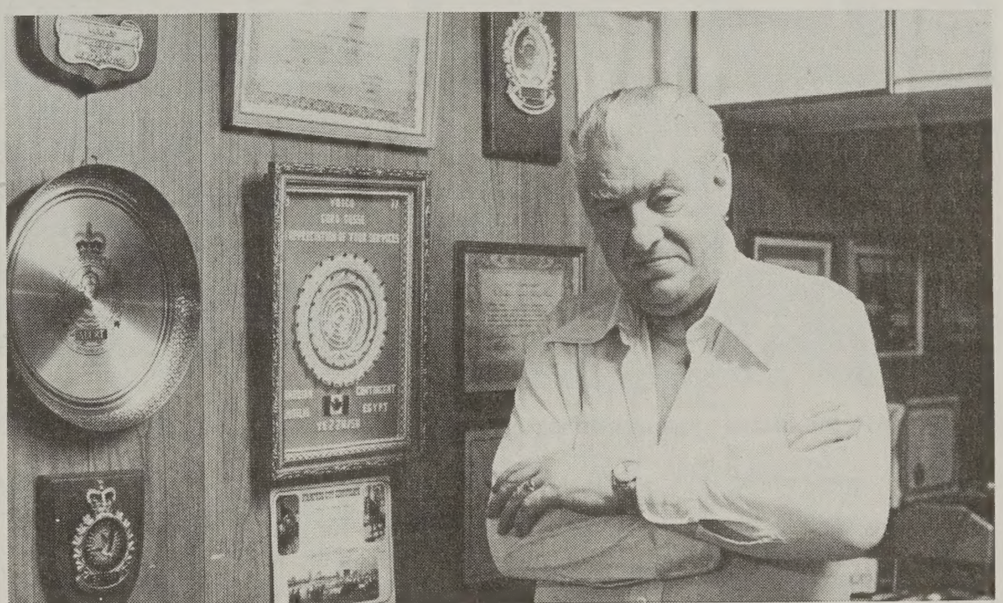
The *Gander Beacon* of Gander, Newfoundland, carried a front-page story about Gordon Gosse, VO1CU. Gordon was honoured with a parade at Canadian Forces Base, Gander, on July 21, 1992. He was awarded the Base Commander's Commendation by Lt-Col Brian Handley. This has never before been bestowed on someone not serving with the Department of National Defence. It is the highest award a base commander can give.

Gordon Gosse also received a plaque from Major Gervais, commanding officer of 770 Research Squadron for "...Enhancing the morale of squadron personnel" through phone patches—the only means of personal communication with CFB Alert until the 1980's."

Gordon, a Royal Navy radio operator in World War 2, moved to Gander in 1946 to work for Gander Aeradio. A licensed Amateur Radio operator since 1970, Gordon says, "A lot of people would not have been too happy in being located such an isolated place if it hadn't been possible for them to speak with family members.

Gordon is a member of the Canadian Forces Affiliated Radio Systems (CFARS). This allows him to operate on special military frequencies above and below the 20-metre amateur band. He has run considerable traffic for Canadians in Germany, Kuwait and the Golan Heights. More recently he was asked by Ottawa to run traffic for Canadian peacekeepers in Bosnia.

The *Gander Beacon* story says that the Gander ARC is tied in with the emergency response system across Newfoundland, calling it "...probably the best emergency system in the country". It was certainly well tested during the Arrow Air crash that killed over 200 US servicemen only a few years ago.


Gordon Gosse, VO1CU of Gander, Newfoundland, with some of the awards from Canadian Forces bases in recognition of his morale-building phone patch service.

YOUNGEST FULL TIME NET CONTROLLER?

All young, newly licensed amateurs, take note: Moncton Area Amateur Radio Club (MAARC) reports that Stéphane Niles, VE1STE, licensed a mere eight months ago, recently made his debut on as host of the MAARC weekly 2-metre net. At 15, Stéphane is believed to be the youngest net controller in Canada.

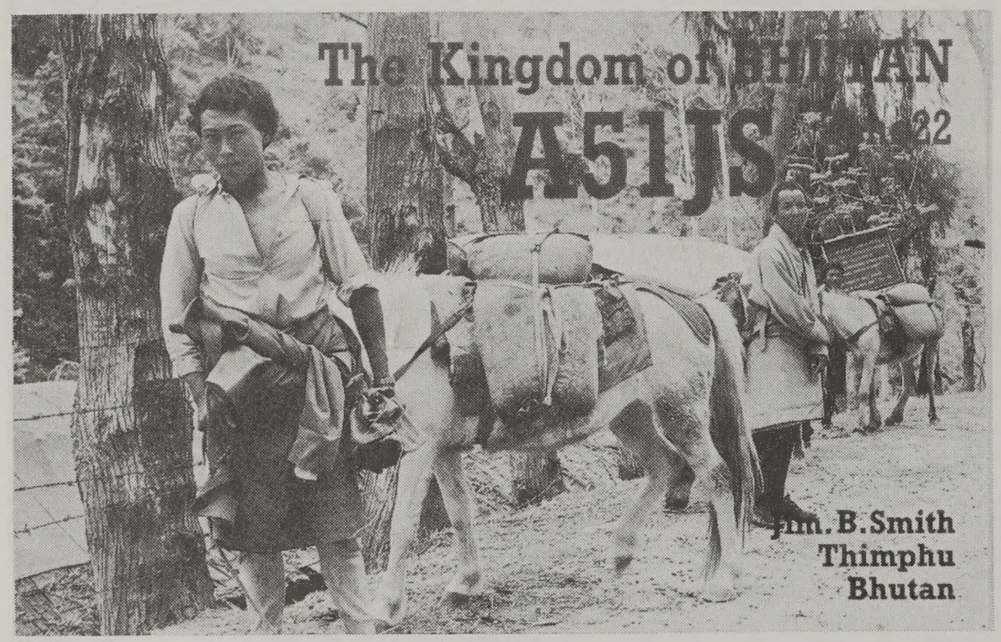
As a Boy Scout, Stéphane lived up to the motto, "Be prepared", and volunteered to host the Sunday evening net when the net controller's position became vacant. Operating from his home with only a 12-volt power supply, a Kenwood handheld transceiver and a J-pole antenna, Stéphane did an outstanding job. Early during his first net, he even fielded a request to pass "emergency traffic". It was his father, Leonard, VE1LJN—nervously monitoring from a rock concert in Shediac! ■

Conducted by Ernest W. Poole, VE3NSZ

The QSL Act

The degree of difficulty one can experience in the act of exchanging QSL cards can range from simple and routine to most difficult. Political upheaval can impose great hardship on a country, its people and its institutions. The postal system is no exception, and thefts do occur. For amateurs, part of the solution is being aware of the problem.

QSL bureaus have felt the impact of political instability. The best example would be Box 88 in Moscow. It is also noted that those in V3 Belize, S7 Seychelles and 9X Rwanda no longer function. The reasons are unknown.



Bhutan (A5) is the second "most wanted" country for DXers (see last month's column).

Many believe that the mutual exchange of QSL cards following a QSO is the final act of courtesy. This rationale can sometimes prove faulty for the DXer. Whenever possible, while in QSO, determine the method of exchange that is being suggested. Should a contact be completed in a "pile-up" situation, it is best to invest a little listening time. In due course the operator will give out all the pertinent information. It is poor protocol and disruptive to ask for QSL information when the DX is working a pile-up.

QSL information given by the DX station should be followed. He or she knows the situation best. It is not wise to assume that sending a card direct to the operator's home call will suffice. The operator may use the services of a QSL manager. Nor can it be assumed that sending a card by a QSL bureau will do. The DX station may not use the services of a bureau. Both related instances could result in failure, with subsequent loss of card, and time, effort and perhaps even funds expended for nothing.

Having obtained the correct QSL route, it remains to initiate the QSL request. But wait! Pitfalls abound! In QSLing direct, certain precautions need to be taken and certain techniques to be employed. An "aide-memoire" follows. It should be helpful, even though it is not exhaustive:

1) Do not use call signs on any part of the envelope to be mailed. This may not seem important for letters sent within Canada or to the US, but it is of vital importance for mail being sent to certain other parts of the world.

2) The enclosed "self-addressed envelope" (SAE) for your return QSL card, as well as the external envelope you mail everything in, require special attention:

External envelope: Make sure that the address is legible and complete. Pay special attention to postal codes, and outside of North America, include the continent as part of the address. Again, remember not to use call signs—neither yours nor that of the DX.

Internal envelope: Usually the SAE is folded and placed in the external envelope. The ends of the fold should be oriented towards the top of the external envelope. This is so that it will not be damaged when the external envelope is opened, perhaps with a letter opener. The fold of the SAE will hold the QSL card and the "greenstamp" or IRC, and should be snug. This technique is fine for safe QSL routes.

Extreme situations will require disguising the appearance of the envelope's bulk, caused by the SAE and other contents. Two envelope sizes can be useful, so that one envelope fits into the other, maintaining a flat posture. The contents can now be wrapped with opaque paper. Steaming the external envelope open can be prevented by using transparent tape on the flaps. There is room for ingenuity and other techniques, to be sure.

3) The QSL card should be completed with care, to ensure legibility and accuracy. Erasures, or writing over an error, are not acceptable, and are considered alterations when submitted for awards.

The time given on the card should be stated as Universal Coordinated Time (UTC) and not local time. Other designations like "Zulu" and "GMT" remain in use. It is vital that the stated time be accurate and clearly legible. An error of several minutes could put your contact on another page of the log book, as 200 or so log entries an hour in a DXpedition is not unusual. A QSL card returned to the sender with the notation, "not in log", really hurts.

Confusion can occur in the use of date formats. What do you do, for instance, with a card displaying 4/3/92? Is this the third of April or the fourth of March in 1992? Cards with this format deserve the "round file". The obvious solution is that the month should be spelled out in full or abbreviated.

4) Decide on what form of remuneration to use to cover the cost of having the operator sending you a reply QSL card. "Greenstamps" (US $1 bills), IRCs (International Reply Coupons), and postage stamps are in common use. A QSL manager in Canada or the US will want to keep things simple. In these countries, postage stamps are easy to obtain.

"Greenstamps" are subject to postal theft. The receipt of currency by mail is illegal in India. IRCs are not popular in what was the old Soviet Union, now known as the Commonwealth of Independent States (CIS). It is at present an unsatisfactory situation having to rely on the Russian mails, but more QSL Managers in postally safe countries are helping with the problem. A list of CIS bureaus, supplied by N6VR, appears below. The addresses of some bureaus are updated from those in the *Callbook*.

DX—continued on page 18

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CRRL VHF-UHF Fall Sprints

This month, we have lots of reports from the June contest. By the time you read this, the September ARRL VHF QSO Party will have passed, and we will be into Sprint season. Let's hope the weird weather that we have experienced in many parts of Canada this summer gives way to kinder, gentler, tropo-DX type weather in the fall season. Keep your radios tuned to the various calling frequencies, and drop me a note describing your activities above 50 MHz.

CRRL VHF-UHF FALL SPRINTS

This is it, people! Fall Sprints are upon us! This year the single-night contests are scheduled for 1900–2300 local time, except on six metres, where the contest is scheduled for 1000–0000 UTC.

September 24: 902, 1296 and 2304 MHz
September 30: 432 MHz
October 6: 222 MHz
October 12: 144 MHz
October 24: 50 MHz

Each band is a separate contest. Scoring is total number of QSOs on a band, multiplied by the number of different grid squares worked on that band. Send a copy of your logs to VE3DSS c/o CRRL. Next year we plan to run the contests earlier in September. They'll be RAC Fall Sprints then. See you in the pileups, everyone!

NORTHEAST VHF CONFERENCE REPORT

Stu, VE2XX, writes that he attended the recent Northeast VHF Conference in Hartford, Connecticut. Stu chaired the "two-metre rap session", and found the discussions interesting and constructive. This is an annual conference that provides an opportunity for VHFers to congregate, meet others, and exchange operating and technical information. Let's hope we can drum up higher Canadian attendance at these affairs.

ROCHESTER MICROWAVE UPDATE CONFERENCE

Just a reminder that the annual Microwave Update Conference will be held on 1992 October 16–18 at the Holiday Inn Holidome in Rochester, New York. This is the premier amateur conference dedicated to technology on bands above 902 MHz. Plans include trips to the local surplus dealers and technical presentations on both Friday and Saturday. There will also be noise-figure measuring sessions, a poster session, an indoor flea market and a banquet on Saturday night. As in other years, ARRL will publish the proceedings. For those who cannot get to the conference, these can be ordered from CRRL. To register, call Dave Halliday, KD5RO/2, at (716) 594-0502. Expect to see a large Canadian contingent at this conference. Among the papers to be presented will be one by Barry, VE4MA.

BAND REPORTS

50 MHZ: My thanks to Jack, VE6JW, for his long letter. You may remember that Jack and company operate VE6EME from outside of Edmonton. Jack's monster six-metre array of four long-boom M-squared antennas with full elevation and azimuth control packs quite a DX punch! In fact, during the June contest, Jack noted that they literally ran out of stations to work! Barry, VE6BMX, did some comparisons between the monster and Jack's old nine-element NBS-design yagi. The verdict: the monster hears a whole lot better than the single yagi. On June 26, Jack heard some really loud signals via the EME path on six metres. They were from another monster station, OH2BC, which was also using four 50-foot boom M-squared antennas. Jack copied OH2BC solid for 40 minutes, and OH2BC copied Jack for the last 12–15 minutes of their sked. They finally made a complete QSO on July 19. This is a first for an Alberta station and a Canadian station! Congratulations!

Gord, VE3KKL, dropped by with a copy of a logbook showing a good deal of 50-MHz activity in June. Among the contacts were VE4AKI and many mid- and far-west contacts on June 18–20. On June 20, things broke open in the other direction and Gord worked GJ4ICD, F5NS, IK5EHR, OK1IBL for a new one, YU3AN, OE5OLL, LXØRL, and piles of stations from the British Isles, Netherlands, Germany and Denmark—all between 1019 and 1816 EDT. Congratulations to all who got in on this major European six-metre opening.

Back out in BC, Kevin, VE7CYT, and Donna, VE7IET wrote to say they are active on six and two metres. Kevin is a radio operator in the navy and plans to operate six from some very rare grids up and down the BC coast. Thanks for the note folks. You are in the database.

144 MHz: In Ottawa, Larry, VE3PAZ, is going great guns on EME using a single yagi and solid-state amplifier. So far he has worked several stations and is gunning to set up skeds to work many more. Speaking of EME, Jack, VE6JW, reported another record on two metres over a path double 371,813 kilometres. He QSOed Grant, VE6TA, for the first VE6-to-VE6 EME QSO. They both took a shot at the rising moon and took advantage of ground gain in both directions to make the grade. Jack was running a single M-squared and a kilowatt, and Grant had 400 watts and four M-squared yagis. Jack also reports that Grant was complaining of QRM from VE6JW who was trying to work KI3W off the moon at the same time VE6TA was trying to work a station in the UK! We should all have such problems! Jack also wrote that he has had success phasing yagis using the techniques described by K2GAL in the *EME Newsletter*. He and the gang have just planted tower with 40-inch wide sides for two-metre EME. Jack hopes to get eight, and eventually sixteen yagis up on two metres. He ought to be loud off the moon with that array! Thus, with VE3BQN and VE6JW, Canada will be a two-metre force to be reckoned with. Jack also mentioned that Dave, W5UN, dropped by on his way to Alaska.

From the contest logs Larry, VE6KC, wrotes to say that the usual expedition to Plateau Mountain was rained out this year, so he went single-op and as a rover. He used an old FDK Multi 2700 and a mirage 80-watt amplifier feeding seven elements on 144 MHz. Larry argues in favour of continuing to allow FM operations in the contests, as there is a large group of "basic licencees" getting on the air, ready to be bitten by the contest bug. Some have even acquired SSB gear and have found out how much more fun they can have operating multimode. Ken, VE7KPB, reported that the June contest was almost a disaster this year. He wrote that, "After mountain topping in June and September of 1991, I was ready for a major effort this year. I got together with VE7s WLM, ZAC and VES. We had everything ready including a four-kilowatt generator and a two-metre kilowatt amplifier to go up the mountain. The site was 25 miles south of Cranbrook at 6868 feet above sea level. On Saturday morning we awoke to heavy steady rain. We decided to give it a try anyway. When we arrived, the rain was light, so we started setting up. The other three ops set up the tent while I began assembling the antennas. The rain increased. After about 20 minutes, it turned to snow and we were into a full-scale blizzard with almost zero visibility. Everything wet was now coated with ice. About an hour after we arrived we decided to head back. We started tearing things down and packing up. Finally, after setting up at the home QTH, we

were on the air, just after 2300 UTC. After hearing a few hints of signal, six opened up and we worked stations on both the east and west coasts of the US."

Ken was disappointed with his results but he plans to keep at it. He plans to be active in the Perseids, so we hope to get some glowing reports from Cranbrook.

902 MHz and up: Clarke, VE3WCB and Keith, VE3DHL, made their first contacts on 2304 MHz in mid-July. Both were using KK7B no-tune transverters and Varian solid-state two-watt amplifiers. The initial contact was over a few miles, mostly as the culmination of an evening of tweaking to determine the frequencies of the local oscillators, measure power output and generally get things set up. Congratulations to both gentlemen for their fine efforts. At press time, they were continuing their efforts to complete a QSO between Clarke's QTH in Milton and Keith's in Kleinburg.

BOOK REVIEW: *YOUR VHF COMPANION*

In mid-July yours truly attended the ARRL Board meeting in Newington, Connecticut. I spotted one interesting book in the pile of documentation for the meeting: *Your VHF Companion*. Imagine my surprise on opening it, to find chapters on FM, packet, SSB, CW, satellite communication, awards and more. The book is an ideal gift for the new amateur who wants to find out about all the great activities we can enjoy above 50 MHz. There are detailed sections on FM and repeaters, including operating techniques, autopatching and descriptions of equipment. Later chapters deal with packet, DX clusters and hardware. My favourite is chapter 4 which describes all the fun things you can do on CW and SSB, including working DX, collecting grid squares, taking part in activity nights, band planning, beacons and contesting. It also includes descriptions of SSB gear for VHF. Chapter 5 covers satellites and provides a history of the OSCAR program including all the latest developments. Chapter 6 is on ATV (amateur television) describes how to get an ATV station going, complete with frequencies and techniques for repeater operation. Chapter 7 on awards is a handy reference for wallpaper chasers. Chapter 8 on transmitter hunting describes the basic requirements to succeed in this endeavour. Chapter 9 on microwave operation helps make the world above 902 MHz easy to approach.

The book has pages of references and names and addresses of contacts for information on activities above 50 MHz. I think this book is a winner. Given the price, you get a lot of information in one place. It should be part of any Amateur Radio instructor's arsenal. It is clear and concise. With books like this around there is no excuse to say, "I didn't know you could do that!"

ARRL JUNE QSO PARTY SUMMARY

The following summary of logs received by VE3KDH and VE3DSS is not official until ARRL does its own tally. See an early *QST* for details.

Note: An asterisk (*) denotes multiop. An (R) denotes a rover. VE3KDH and VE3VD will mail Toronto VHF Society certificates to the high single-op stations in each Canadian region. ■

Call	Band	QSOs	Points	Grid Squares	Total Score
VE3ONT *	24000	1	4	1	4
VE3ONT *	10000	33	132	3	396
VE3ONT *	3456	5	20	3	60
VE3ONT *	2304	11	44	7	308
VE3SMA	2304	1	4	1	4
VE3ONT *	1296	30	90	17	1530
VE3WCB	1296	16	48	9	432
VE3SMA	1296	7	21	4	84
VE2XX	1296	2	6	2	12
VE3FVW	1296	1	3	1	3
VE3ONT *	903	6	18	6	108
VE2XX	903	4	12	3	36
VE3ONT *	432	94	188	35	6580
VE3SMA	432	27	54	14	756
VE2XX	432	14	28	9	252
VE3NPB/R	432	12	24	10	240
VE6BOJ	432	23	46	5	230
VE7BLF	432	14	28	6	168
VE6KC	432	11	22	4	88
VE1MQ *	432	7	14	3	42
VE3SAU *	432	9	18	11	18
VE4AQ	432	3	6	3	18
VE3FVW	432	2	4	2	8
VE3GOG	432	1	2	1	2
VE7BEE	432	1	2	1	2
VE3ONT *	220	75	150	35	5250
VE2XX	220	16	32	10	320
VE7BLF	220	4	8	3	24
VE3SAU *	220	2	4	2	8
VE3ONT *	144	309	309	44	13596
VE3EZP	144	89	89	29	2581
VE3NPB/R	144	57	57	35	1995
VE3WCB	144	64	64	21	1344
VE2XX	144	58	58	21	1218
VE3SMA	144	65	65	17	1105
VE1MQ *	144	44	44	15	660
VE6DIL/R (DO20)	144	77	77	8	616
VE6BOJ	144	76	76	7	532
VE7BLF	144	39	39	8	312
VE3GOG	144	24	24	12	288
VE3SAU *	144	28	28	9	252
VE4AQ	144	12	12	10	120
VE6DIL/R(DO31)	144	17	17	4	68
VE6DIL/R(DO30)	144	16	16	4	64
VE6DIL/R(DO21)	144	13	13	4	52
VE3FVW	144	6	6	5	30
VE7BEE	144	5	5	3	15
VE7KPB *	144	3	3	2	6
VE3ONT *	50	554	554	212	117448
VE7BLF	50	145	145	72	10440
VE7CYT	50	146	146	67	9782
VE6BOJ	50	119	119	69	8211
VE3SAU *	50	106	106	74	7844
VE3WCB	50	113	113	69	7797
VE7BEE	50	122	122	61	7442
VE2XX	50	91	91	59	5369
VE1MQ *	50	86	86	61	5246
VE7KPB *	50	70	70	54	3780
VE3SMA	50	71	71	51	3621
VE3NPB	50	62	62	55	3410
VE4AQ	50	65	65	52	3380
VE3FVW	50	14	14	15	210

Overall High Scores:

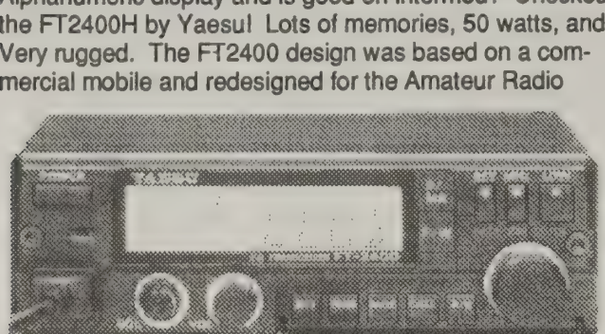
VE3ONT	547767	.....	A new Canadian record!
VE2XX	23608	.....	High Score—East
VE3WCB	22275	.....	High Score—Ontario
VE7BLF	19580	.....	High Score—West
VE6BOJ	19521		
VE3SMA	18705		
VE3NPB/R	14300		
VE3SAU	13416		

VE1MQ	11376
VE7CYT	9782
VE7BEE	7459

VE4AQ	5395
VE7KPB	4088
VE3EZP	2581
VE6DIL/R	2460
VE6KC	740
VE3FVW	567
VE3GOG	338
VE6EME	167

YAESU FT2400H

Looking for a powerful mobile that has an easy to read Alphanumeric display and is good on intermod? Checkout the FT2400H by Yaesu! Lots of memories, 50 watts, and Very rugged. The FT2400 design was based on a commercial mobile and redesigned for the Amateur Radio



market. The FT2400H is by far one of the best selling 2 Meter mobile unit available today. It comes with a backlit touchtone microphone, power cord, mounting bracket, and many more features.

SPECIAL CLEARANCE

Atlantic Ham Radio Ltd. has purchased all remaining Amateur radio equipment and parts from "Century 21 Communications" and "Armaco Electronics Ltd."

Century 21 is no longer an Amateur Radio dealer and many Hy-Gain, Cushcraft, Kenwood, and ICOM specials are available as clearouts.

Armaco Electronics Ltd. is no longer a Yaesu distributor and ***Atlantic Ham Radio Ltd.*** has purchased over $50,000 in Yaesu parts and accessories. Call or write for your new or older parts needs and for Yaesu repairs. We also have a full time technician on staff to look after your repairs.

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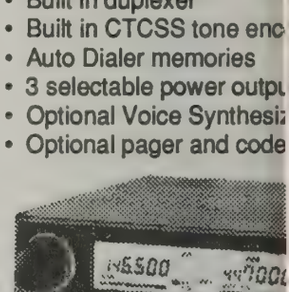

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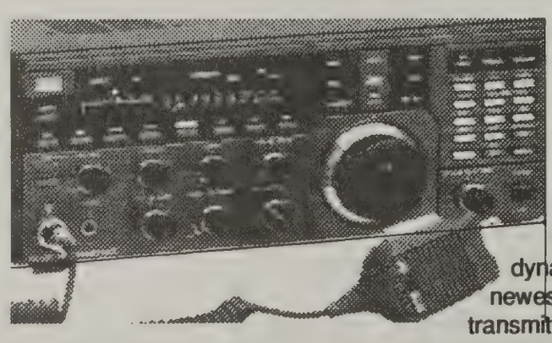

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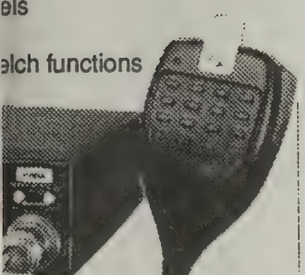

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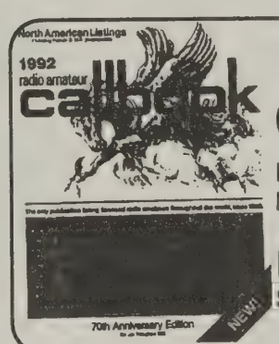

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W2AU Big Signal 4:1 Balun	29
W2DU-HF Non-Ferrite, High Power, 1:1 Balun	39
W2AU/W2VS 5 Band AntKit with W2AU 1:1 Balun	129
Dipole Traps, specify 10, 15, 20, 30, 40M	65
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Ansulator-Dipole centre insulator with SO-239	15
AW-25 25' 7 Strand/14 Guage antenna copper wire	9
AW-75 75' Antenna copper wire	19
AW-125 125' Antenna copper wire	25
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The IARU Monitoring System

Concerning improper use of the amateur bands...

By Malcolm Hamon, VE3KXH
Canadian Coordinator
IARU Region 2 Monitoring System

At its meeting in Indonesia, the IARU Administrative Council spent considerable time discussing what appears to be a growing problem: the improper use of the amateur bands.

As a result, IARU's International Secretariat was asked to make available the following important information to IARU member-societies around the world:

1. The ITU is not a police force...

The International Telecommunication Union (ITU) exists by virtue of an agreement between nations to cooperate on telecommunications matters. This agreement has been entered into freely by most sovereign nations of the world. However, by agreeing to respect the regulations and to use the mechanisms of the ITU, these nations have not relinquished their sovereignty. Each country reserves the right to do what is necessary to protect its own national interests.

Thus the ITU has no enforcement authority. ITU officials and staff may *educate* an administration that is responsible for stations causing harmful interference outside its borders. They may *encourage* an administration to take corrective action. But they *cannot* force an administration to act.

2. Our mission as radio amateurs is to persuade administrations to protect our interests...

When radio amateurs suffer harmful interference from stations operating in violation of the ITU Radio Regulations, it is the national telecommunications administrations and not the ITU that have the power to provide relief. Each IARU member-society is obligated to promote the objectives of the IARU within its national borders. These objectives include the protection, promotion and advancement of the Amateur and Amateur-Satellite Services, within the framework of regulations established by ITU. Part of this obligation is to seek the assistance of each national telecommunications administration in resolving interference problems caused by improper use of Amateur Radio allocations. (In some countries there may be only limited opportunities to seek such assistance. It should be remembered that no IARU member-society is ever required to act in a manner contrary to the laws of its country.)

3. The IARU Monitoring System is there to help...

The IARU Monitoring System (IARU M/S) is a network of radio amateurs who are expert at documenting the operation of non-amateur stations in the amateur exclusive bands, and the operation of unauthorized non-amateur stations in our shared bands. Each member-society is encouraged to participate in the IARU Monitoring Service and to forward regular reports to their Regional Coordinators. Malcolm Hamon, VE3KXH is the Canadian Coordinator. He works with Mark Allen, WJ7X, who is responsible for all Region 2 monitoring activities.

IARU's Resolution 91-1 outlines the procedures to be followed in reporting improper use of the amateur bands through the IARU M/S. A copy of this resolution is available from VE3KXH on request.

4. There are three kinds of "improper" use...

Intruders: These are stations operating in derogation of Radio Regulation 342, i.e., causing harmful interference to stations operating in accordance with the Table of Frequency Allocations by operating contrary to the Table. It is important to note that it is the harmful interference, not the operation contrary to the Table, that must be the basis for a complaint. Stations that operate contrary to the Table but cause no harmful interference to stations of other countries are not in violation.

The appropriate way to address such interference by intruders is to request that your administration register a complaint with the administration of the offending station. Resolution 91-1 describes an alternative procedure which may be used if this avenue is not available or is unsuccessful. Sometimes harmful interference is clearly the result of a technical fault in the transmitter, and not the result of a deliberate choice of a frequency in an amateur band. In such cases it is not considered a violation of procedure for the matter to be brought directly to the attention of the technical personnel responsible for the operation of the transmitter. Usually such personnel are grateful to learn of the problem, and to have the opportunity to correct it before official notice of the problem is taken.

Unlicensed stations: This is a large and growing problem. While few administrations consider they have adequate resources to track down unlicensed stations operating in their jurisdictions, they still have an obligation to do so. Radio Regulation 2020 requires that, with few exceptions: "No transmitting station may be established or operated by a private person or by any enterprise without a licence issued in an appropriate form and in conformity with the regulations by the government of the country to which the station in question is subject." IARU member-societies should draw the attention of their administrations to the problem of unlicensed transmitters and the interference being caused to authorized services.

Satellites: The main problem in this area is the use of Amateur-Satellite allocations by satellites launched for non-amateur purposes. A secondary problem, that of bona fide amateur satellites being used for non-amateur purposes, can generally be addressed without involving administrations.

Advance warning of the first kind of problem is available because Article 11 of the Radio Regulations requires advance publication of the details of planned satellite networks, including amateur satellites. [Resolution 642 provides some relief from the advance notification requirements for amateur ground stations, but not for the satellites themselves.] IARU's International Secretariat is trying to monitor these advance notifications so that appropriate action can be initiated if there is a question about the intended use of a particular satellite.

5. IARU member-societies and regional organizations should implement IARU Resolution 91-1...

Resolution 91-1 represents a change in policy for IARU. Recognizing that improper use of the amateur bands is a growing problem, the IARU Administrative Council reviewed the subject in depth, and concluded that the traditional ways of addressing the problem were no

IARU Monitoring—continued on page 18

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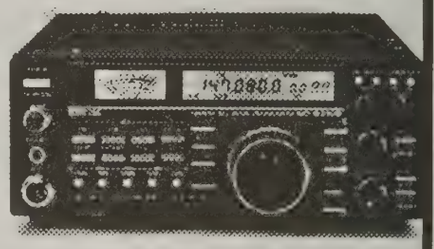

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1992 Jamboree-on-the-Air

The Annual Scouts' Jamboree-on-the-Air (JOTA) is scheduled to take place on October 17–18, 1992.

Are you fired up to help make this 35th Jamboree-on-the-Air an event to be remembered? Is your local club going to be operating a station involving local Scout or Guide groups? Have you invited Scouts or Guides from your community to come to your shack during the JOTA weekend, to talk to others across the country and around the world? Will you tell them about some of the things that make Amateur Radio and Scouting two pursuits that appeal to youngsters around the world?

The JOTA idea was launched at the World Scout Jamboree at Sutton Coldfield, Birmingham, England, in 1957. Each year since then, in October, scores of countries have taken part in Jamboree-on-the-Air. It runs for 48 hours, from 0000 hours Saturday to 2400 hours Sunday local time.

Any authorized frequency may be used to establish a contact. National radio regulations must be strictly observed. The World Scout Bureau in Geneva suggests the use of these World Scout Frequencies:

CW	SSB
3.59 MHz	3.74, 3.94 MHz
7.03 MHz	7.090 MHz
14.07 MHz	14.29 MHz
18.08 MHz	18.14 MHz
21.14 MHz	21.36 MHz
24.91 MHz	24.96 MHz
28.19 MHz	28.99 MHz

A special note about the World Federation of Great Towers (WFGT). This group of large towers cooperates for special activities with the aim of stimulating communication and exchanges between the people of the world.

WFGT is inviting scouts to take part in JOTA from the top of their towers. This year, Amateur Radio stations will be installed on these participating towers:

Centrepoint Tower, Sydney, Australia; Donauturm, Vienna, Austria; CN Tower, Toronto, Canada; Tour Olympique, Montreal, Canada; Empire State Building, New York, USA; Tour Eiffel, Paris, France; Euromast, Rotterdam, Netherlands; Ostankino Tower, Moscow, Russia; Blackpool Tower, Blackpool, UK; and British Telecom Tower, London, UK. WFGT hopes to issue a JOTA poster with all these towers on it.

Television may be used to link New York, Paris and Moscow during JOTA weekend. Further details will be available from the World Scout Bureau station, HB9S in Geneva, during JOTA.

ON4CLM TENTH ANNIVERSARY

On November 1, 1944, Canadian troops liberated the town of Knokke on the Belgian coast after fierce fighting and the loss of many Canadian lives. Each year, this occasion is commemorated by a 33-kilometre "Canadian Liberation March", with Canadian and Belgian veterans participating. This is the tenth year that special-event station ON4CLM will join in the festivities. ON4CLM will be on the air from Knokke on October 30–November 8. A beautiful colour certificate is available for licensed amateurs and SWLs who contact or hear the station. Each year a different Canadian Regiment is honoured with its badge and colours on the award. The award costs $5 US or ten IRCs. All proceeds go to a welfare fund to maintain the memorials and keep ON4CLM on the air. Send log information and money or IRCs to ON4CLM, Box 110, B-8300 Knokke Heist, Belgium.

COLUMBUS DAY IN BAHAMAS

To celebrate the 500th anniversary of Columbus landing in the New World, the Bahamas Amateur Radio Society (BARS) will operate special-event station C6A500 throughout the month of October. On Columbus Day, October 12, the station will operate continuously. At other times it will operate on one or other of these frequencies: 3590, 3740, 7030, 7090, 7290, 14,070, 14,135, 14,290, 18,150, 21,140, 21,204, 21,390, 24,950, 28,190, 28,350, and 28,990 kHz, as well as on 146.640-MHz FM (–). All BARS members may use the /500 suffix throughout October. Awards are available for making three different /500 contacts, and for making ten different /500 contacts including C6A500. For QSL, send SAE and three IRCs to BARS, Box SS6004, Nassau, Bahamas. For the awards, send a copy of your log and three IRCs. In connection with these events, N9HXL/C6A and N2HOH/C6A plan to be active from the small island of San Salvador in October.

FALL QST QSO AWARD PARTY

This annual event, sponsored by CRRL, will take place at 0000–2400 UTC, 1992 November 8. To earn a *Worked QST Award*, contact any eight of the twelve QST stations that will be operating just above 3.75, 7.05, 14.11 or 21.25 MHz. To receive the award, send a copy of your log with an SASE or one IRC to David Noon, VE3IAE, 19 Honeysuckle Crescent, London, ON N5Y 4P3. ■

Algoma—continued from page 3

the US Naval Communications Reserve was started at what is now Lake Superior State University in Sault Ste-Marie, Michigan. They had a couple of surplus navy aircraft radios which Walt frequently used, signing W3CWE/8. The Reserve unit was commanded by a lieutenant who had been a communications specialist during the war. The lieutenant moved away soon after the unit was formed, and, although Walt outranked him, he was classed as an Ordinance Specialist, and the Navy was adamant about having a communications specialist in charge. The Reserve unit at the school was disbanded soon after.

In 1952, after Walt and Olive had settled down in the new house they had built, Walt decided it was time to get a VE call. Then, there was no such thing as reciprocal licensing, but he had no problem with the exam. He heard that VE3CWE was not in use, so he wrote to the DOC and received that call.

Nowadays, Walt can often be found at the low end of the HF bands working DX. He enjoys chasing the rare ones. He has 330 countries worked with 323 confirmed in mixed mode. Still, Walt prefers CW. He is a member of ARRL and has been in CRRL since its inception. He belongs to the CANAD-X, and served a term as president of the Canadian Standards Association. We wish him many more happy years in this fine hobby. ■

Silent Keys

Conducted By Ray Staines, VE3ZJ

It is with deep regret that we record the passing of these amateurs:

VE3CUG, Ross Tuttle, Scarborough ON
VE3OIA, Andy Rattray, Brantford ON
VE3ORB, Ben Rachlin, Downsview ON
VE3RO, Art Walker, Port Perry ON
VE6CHC, Henry Hanon, Edmonton AB
VE6DZ, D. R. Sandy McArthur, Edmonton
VE7BLC, Ed Crosby, Clearbrook BC
VE7BQS, Jim Stephen, Vancouver BC
VE7BTA, Charles Toombs, Duncan BC
VE7MM, Bill Skelhorne, Aldergrove BC

Note: Silent Key reports sent to *QST Canada* must include name, address and callsign of the reporter. To avoid unfortunate errors, reports are confirmed only through acknowledgement from the family of the deceased. Thus, those who report a Silent Key may not receive an acknowledgement from *QST Canada* ■

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Section News/Nouvelles des Sections

Conducted By Ken Oelke, VE6AFO

The CRRL Field Organization Forum

SECTION MANAGER ELECTION NOTICE

To all CRRL members in the Ontario Section: You are hereby solicited for nominating petitions pursuant to an election for Section Manager. Name of the incumbent appears on page 2 of this *QST Canada*. A petition, to be valid, must carry the signatures of five or more CRRL Full members residing in the Ontario Section. It is advisable to have more than five signatures. Photocopied signatures are not acceptable. Signatures must be on the petition. Petition forms FSD-129-C are available from CRRL HQ in Arva, Ontario, but are not required. The form below is acceptable:

..... (place and date)
CRRL Field Services Manager
2025 Richmond St., Box 56
Arva, ON N0M 1C0

We the undersigned CRRL Full Members residing in the Ontario Section hereby nominate ..... (name and call sign) as Section Manager for this Section for the next two-year term of office.
..... (signatures and call signs) .....
(addresses with postal codes)

A Section Manager must be a resident of his or her Section, a licensed radio amateur holding a Canadian Advanced Certificate or equivalent, and have been a CRRL Full member for a continuous term of two years at time of nomination. Petitions will be received at CRRL Headquarters in Arva, Ontario, until 1600 EST 1992 December 11. If only one valid petition is received, the person nominated will be declared elected. If more than one petition is received, a balloted election will take place. Ballots will be mailed from CRRL Headquarters by 1993 January 01. Returns will be counted after 1993 February 20. A Section Manager elected as a result of these procedures will serve for a two-year term of office that begins on 1993 April 01.

You are urged to file a nominating petition immediately. *—Ken Oelke, VE6AFO, Field Services Manager*

REPORTS FOR JULY 1992

Reports invited: CRRL Section Managers (SMs) and their Section-level assistants coordinate traffic handling, emergency communications and bulletin service across Canada. Your SM (name and address appear on page 2 of this *QST Canada*) welcomes reports of individual and club activities for publication in this column. Activities do not have to be related to the CRRL Field Organization or to CRRL.

Alberta: SM: Don Wilcox, VE6CG. For the month of July, some follow-up stories. In May, four events took place: the Rocky Mountain Road Rally, the Golden Triangle, the Great Canadian House Give-Away, and the Run, Walk 'n' Roll Run. The last run, which was sponsored by the Foothills Academy, helped raise funds for the handicapped. In June came the Jasper-to-Banff Relay. On June 7, in Calgary, it was the Super Cities Walk for the Multiple Sclerosis Society. All in all, the total of man hours was 1500 for two months' work. And we call this a hobby! Last weekend I ran up to Red Deer to the annual picnic for a few hours. When I attended, the group had 171 camping units registered. Over 200 headed for the Saturday night barbecue. Good going, Red Deer. During May and June, Calgary ARA held fox hunts with categories ranging from Novice to Wolf to a Co-ed category. Each team had to have a name, and some were not too bad: Hurro' Rangers (Wolf), Flying Hounds (Novice), Joy Riders (Novice), Two Much Plus (Code). Two Much Plus (VE6AFO and VE6LGO) were overall winners. My team, the Roving Rhinos, came in fourth. The distances covered ranged from 28–57 kilometres. In one test, the Fox parked next to Glenmore Reservoir and used a magmount antenna on the boat ramp rail that ran into the lake. We got some strange directions from that one! Times were in the 32–95-minute range. 36 amateurs with some non-amateurs as team members made up the 21 teams. After each hunt, which ran for two hours starting at 1900, the hunters, huntmaster and fox met at a local coffee house for coffee or supper. That blew away a few diets. Next month, a Field Day follow-up.

British Columbia: SM: Ernie Savage, VE7FB. BC Public Service Net (3729 kHz, 0130 UTC daily) Manager Jim, VE7JN, reports check-ins: high—163, low—109, and total—4433. Final total is down. Summer holidays? BC Emergency Net (BCEN, 3652 kHz, 1900 UTC) Manager Ray, VE7BCL, has moved to Vancouver Island. His QTH is 1052 Glen Forest Way, R R 1, Victoria, BC V9B 5T7, Tel (604) 478-1381. Check-ins for month—1149, QTC—473. BCEN is healthy and growing. We welcome Vicky, VE7DKS from Victoria; Todd, VE7BPO from Kelowna; Peter VE7BUU from Cranbrook; and Gary, VE7GDS from Victoria. We now have three young ladies. Let's have more. Please remember that while on net, code speed is 10 wpm. Off the net, your speed is what the receiver likes. Tom, VE7BNI, made BPL for July with 543. Pete, VE7JT, is home and walking better each day. Telephone him at (604) 530-9272 or drop him a message. Wally VE7CJT had a serious fall down the stairs and suffered several fractures. He is still in hospital.

Manitoba: SM: Bill Crooks, VE4JR; ASM: VE4IX; STM: VE4STU; SEC: VE4PN; NM's: VE4AHG, VE4FP, VE4LB, VE4TE. Approximately 299 amateurs attended the 29th International Hamfest at the International Peace Gardens, with amateurs from ND, SD, MN, MB, SK and many other areas. Unfortunately I could not attend, but from all reports, people enjoyed themselves. Marv, VE4KE, and Mark, NØFAZ, were awarded Amateur of the Year for Canada and the US. Each year this event gets better. Our thanks go to the many volunteers who help out. Notes from VE4 Land via Bill, VE4UX: The Manitoba Amateur Radio Museum got off to a fine start on July 23. Officials from CRRL/CARF attended. Local VE4s there to man VE4MTR included Bill, VE4KX; Dave, VE4XN; Bill, VE4IW; Leon, VE4HA; Tom, VE4SE; Ruth, VE4XYL; Paul, VE4AE; Dick, VE4QK; Ron, VE4YQ; Bill, VE4UX, Bill, WCØM; and Bob, VE4RO. I was only there on Friday so I may have missed many that helped make the event a success. The museum has a repeater: VE4MTR, on 146.91 MHz (–). There are facilities for HF, RTTY, VHF, CW, and AMTOR on nearly all frequencies. Organizers hope to keep the Museum open every day, all year round. All amateurs welcome anytime! We in Winnipeg also wish to announce another site that is promoting the hobby to all. VE4TTU is located in the Manitoba Museum of Man and Nature, downtown near historic Portage and Main. The event is "Touch the Universe"—hence VE4TTU. For many months now Ed, VE4YU; Yori, VE4ACX; Judy, VE4JBN; Pat, VE4PLG; Peter, VE4PJ; Kay, VE4YF, and many others have done duty, but their names and calls escape me. Sorry!. The station is on air on weekends on HF in most modes modes, and on VHF with voice and packet. Keep an ear open for this interesting station. Duck Race helpers omitted in the June report include VE4s ACX, AJG, BDK, HK and PLG. Early Sunday, June 21, some 50 amateurs and hundreds of other volunteers set up along the 26-mile course of the Manitoba Marathon. 6187 participants registered for all events from the full Marathon to the wheelchair event. Thanks to Dave, VE4EF, who helped organize this event.

Maritimes-Newfoundland: Acting SM: Carl Anderson, VE1UU; STM: Bob Kirkpatrick, VE1VAR; BM: Brent Taylor, VE1JH. No report available. The Maritimes-Newfoundland Section needs a Section Manager. Duties are not onerous and work can be rewarding. Contact Acting SM or CRRL for details.

Ontario: SM: Larry Thivierge, VE3GT @ VE3WQ; A/SM and BM: VE3AV @ VE3JF; A/SEC: VE3GT @ VE3WQ; STM: VE3CYR @ VE3KRG; TC: VE3EGO. NMs VE3AJN, VE3CYR, VE3GSQ, VE3NDI, VE3ORN and VE3POJ. It appears that gremlins were active on my May column that appeared in the August Section News. In the lead item the call VE3SSB should have read VE3SB. VE3AC, VE3BEK, VE3CAN and VE3EDL provided radio communications for the Sudbury Cycling Club Race. New repeater VE3URU on 444.45 MHz, sponsored by Golden Horseshoe Repeater Club, is in Downsview and provides excellent coverage to southern Ontario and western New York. The system offers 24-hour autopatch, autodial and other unique features. VE3AWI and VE3WEJ responded to a last-minute request and assisted VE3EBY with essential communications at the second annual Belle River Marina Waterfest. They were rewarded for their efforts with foamy cold refreshments. VE3OTH will be closing his packet BBS soon and would like to thank all who supported him and the BBS. VE3THN and VE3NNC will be providing a replacement BBS in the near future. John, VE3GTE, is now VE7GTE in Pitt Meadows, BC. ECs reporting this month were VE3FS, VE3LPM, and VE3LVO. High Counties ARES provided complete communications for the Mediaeval Festival in Orangeville, with 17 operators present for both days. Amateur Radio and the NTS came to the rescue for a local St Catharines man who was vacationing in the Bahamas aboard his small sailboat. His father had suffered a serious heart attack and it was necessary to contact him. Local EC VE3NDX contacted VE3DVE who sent a priority message via the NTS and the ARN. The message was picked up by 8P6AA who transmitted it several times over the Waterway Maritimes Net, since this net was known he monitored on 7.268 MHz. Half a day later his family received a long distance call from him in the Bahamas. As a result he is going to put forth a determined effort to obtain his own amateur licence.

Quebec: SM: VE2ALE; STM: VE2ED; OBS: VE2GOP. From VE2IJ and Montreal ARC: Calling all amateurs: Mark 1992 October 30, as a date to remember. Montreal ARC cordially invites all radio amateurs, both young and old, with their friends, to celebrate its 60th Anniversary. This is a once-in-a-lifetime occasion to relive the golden

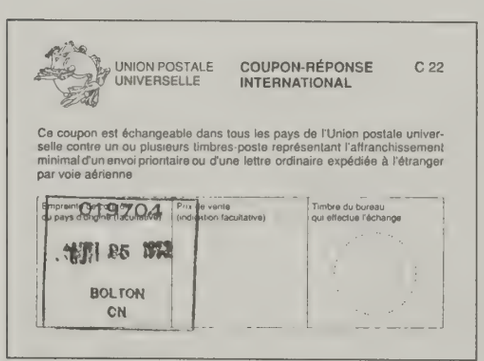
Section News–continued on page 18

DX—continued from page 6

Call Area Address
UA1A/C—37 Lt Schmidt Embankment
199034 St Petersburg, Russia
UA3A/C—9/10 Prospekt Vernadskogo
117311 Moscow, Russia
UA—Box 88
Moscow, Russia
UB—27 Industrial Street
252056 Kiev, Ukraine
UC—48 Kazimts Street
220034 Minsk, Byelorus
UD—Box 165
370000 Baku, Azerbaijan
UF—12 Borchorm Street
380044 Tbilisi, Georgia
UG—87 Prospekt Ordzhonikidze
375007 Yerevan, Armenia
UH—Box 555
744020 Ashkhabad, Turkmen
UI—86-A Khurshid Prospekt
700017 Tashkent, Uzbek
UJ—10 Sport Street
734026 Dushanbe, Tadzhik
UL—105-A Rozybakiyev Street
380033 Alma-Ata, Kazakh
UM—1 Botanicheskiy Pereulok
720052 Frunze, Kirghiz
UO—59 Bernadratstsi Street
277014 Kishinev, Moldova
UP—15 Basanavichaus,
232009 Vilnius, Lithuania
UQ—Box 164
226098 Riga-Centre, Latvia
UR—Box 125
200125 Tallinn, Estonia

POSTAL TIPS AND THE IRC

Overseas postage of $5 or more is GST-free provided the stamps are affixed and letters are posted at the time of purchase. The transaction must take place under the supervision of a postal clerk.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Ce coupon est échangeable dans tous les pays de l'Union postale universelle contre un ou plusieurs timbres-poste représentant l'affranchissement minimal d'un envoi prioritaire ou d'une lettre ordinaire expédiée à l'étranger par voie aérienne
Empreinte du timbre du pays d'origine (facultative)
Prix de vente (indication facultative)
Timbre du bureau qui effectue l'échange
09704
BOLTON
CN

IRCs are also GST-free, and currently cost $1.15 each. At time of purchase, a postal franking stamp must be placed on the lower left hand side of the coupon. Recent IRCs issued in Canada are of the airmail type. Older IRCs in circulation are for surface mail. Be aware of this distinction. It is prudent to advise the intended recipient, because the appearance of both is very similar. IRCs are redeemable only in countries belonging to the International Postal Union (UPU). Member-countries are listed in the *Callbook* under "International Postal Rates".

THE WAIT

The Japanese have set the standard in excellence with respect to QSL cards. The photography and finish of their cards are fabulous, and represent the culmination of a memorable occasion for all participants—the stuff of dreams to be lived again and again when looking through QSL albums. The wait can often be stressful and many months can pass before a precious card arrives.

Should anxiety set in while waiting for a QSL card to arrive, be patient. To QSL again only puts more stress on the system. Follow the status of those cards via news sheets, magazines and friends. INDEXA, a DX net, operates daily at 2330 UTC on 14.2366 MHz. The purpose of this net is to supply DX-related information, and to provide assistance in DX matters. ■

Section News—continued from page 17

days of Amateur Radio in the Montreal area. A Buffet Dinner is planned. Information to be announced soon via repeaters, PBBS's and at club meetings. A fun night to meet old friends and make new ones. Once again all amateurs are reminded that they should not advertise their absence from a home station at any time, since there are many scanners, and VHF-UHF units in the hands of unscrupulous people just waiting for you to announce your absence and have your equipment stolen. Beware! VE2DOD is now using VE2YV and retaining the VE2DOD call for his Pactor mailbox on 140.73 MHz 24 hours a day. Visitors to the Montreal area during July were Alex, SV3BUP, and Ken, VK3KE. Montreal ARC (VE2ARC) is planning the buffet supper for its 60th Anniversary on October 30. Thanks to Hank, VE2HN, at the VE2CWI Field Day site, and to VE2BP/2 for the proper format of their Field Day message to the SM. All others left much to be desired in format and presentation on the air. Clubs should take a much greater interest in providing instruction regarding format, presentation and transmission of formal traffic. Otherwise, with the new amateurs now coming on the bands, it is questionable whether they will be efficient in passing traffic during emergencies as required.

Saskatchewan: SM: Joan Lloyd VE5JML @ VE5AGA. The annual Peace Gardens Hamfest was held on July 10–12, 1992. The 60 amateurs, families and friends from Saskatchewan who attended included these VE5s: AFQ, AG, BY, DA, DSC, EM, FMW, GC, HG, IG, IVK, JML, KI, KL, LE, LS, MML, MX, ND, OAD, OE, PL, QM, RAL, RQ, SZ, TK, VRA and WV. The annual Moose Jaw Air Show took place on July 11–12 with VE5s ABC, ADO, CD, GW, IC, JJP, KZ, MRY, NG, RVP and ZO providing communications. Congratulations to Frank, VE5BBB, and wife Cheryl, on the July 19 birth of daughter Petra. The Saskatchewan Mini-Hamfest held in Saskatoon began on July 24 with a social evening hosted by Saskatoon ARC. July 25 saw 175 amateurs and friends gathered at SIAST, Kelsey campus, where they took in the Saskatchewan Amateur Radio League (SARL) annual meeting, ARES and packet meetings, transmitter hunts, contests, a slow-scan television demonstration by Bill VE5DN, and many eyeball QSOs. A new *Saskatchewan Callbook* was available at the hamfest. The new SARL executive is: President: Eric VE5HG; Vice President: Bruce, VE5ND; Secretary: Ned, VE5NED; and Treasurer: Joan, VE5JML. Regional directors will be named later. SARL memberships and callbooks are available from Joan, VE5JML. Amateurs in the Moose Mountain area held a picnic hamfest on July 26 at the home of Rita, VE5BA. 73 ■

IARU Monitoring—continued from page 13

longer adequate. An alternative procedure is now in place for use when the traditional approach is not available.

The IARU Administrative Council recognizes that Resolution 91-1 places an additional burden on IARU member-societies and regional organizations. However, this burden is consistent with the seriousness of the problem, and the need to address it effectively.

This information should be shared with individuals who are active in the IARU M/S or are interested in its work.

My thanks to IARU Secretary Larry Price, W4RA, for providing this information on the growing threat to the international amateur bands. —*VE3KXH*

HELP WANTED

Malcolm Hamon, VE3KXH, who coordinates Canadian monitoring activities, needs your help. He is looking for Canadian amateurs across the country to form part of a monitoring team to help combat the problem of interference to the Amateur Service. Please contact Malcolm at 5 East Bank Road, Newcastle, ON L1B 1B7, Tel/Fax (416) 623-0472. ■

MOVING?

For uninterrupted delivery of *QST* and *QST Canada*, please send your change of address notice to CRRL, Box 56, Arva, ON N0M 1C0 eight weeks before you move. Don't forget to quote your call sign or the seven-digit number on your mailing label. —*Ray Staines, VE3ZJ* ■

Calendar

Attention: Deadline for items is the 20th of the second month preceding month of publication. For example, information should reach *QST Canada* by January 20 to be included in a March issue.

Greenwood, NS: Ham and Electronics Flea Market. 1992 October 24, at Greenwood Community Centre. Open 0900–1400. Talk-in on VE1WN 147.240 MHZ (+). For more information contact Jim Baskey, VE1APV, Box 63, Greenwood, NS B0P 1N0. Tel (902) 765-6272; Fax (902) 765-5449.

Newmarket, ON: Annual Hamfest and Flea Market, 1992 November 14, at Huron Heights Secondary School, north side Davis Drive. Sponsored by York Region Amateur Radio Club. Three large halls, refreshments, video presentations. Doors open 0900, 0700 for vendors. Admission $5. Talk-in on VE3YRC, 147.225 MHz (+). For more information, contact John Ellison, VE3WHY, Tel (416) 841-6220.

Port Colborne, ON: Welland County ARC Ham Radio and Computer Flea Market, 1992 October 12, at Bethel Community Centre, Chippewa Road just off Main Street East. Open 0900, 0700 for vendors. Admission $3. Indoor tables $3.00. Talk-in on VE3WCR 147.30 MHz (+) and on 146.52-MHz simplex. For more information, contact Welland County ARC, Box 492, Port Colborne, ON L3K 5V8, Tel (416) 834-4706. ■

Public Service/Service Public

Conducted By Bob Boyd, VE3SV
and Ken Oelke, VE6AFO

A Quiz

Let's start this month with a quiz. What's the difference between a hurricane, a cyclone, a typhoon and a tornado? The answer is—none! In the northern hemisphere, all rotate counterclockwise around a low pressure zone. Below the equator, the rotation is clockwise. In the Atlantic and Caribbean, cyclones are known as hurricanes, while in the western Pacific and the China Sea they are called typhoons.

MISSISSAUGA REVISITED

Ron Moriarty, VE3MHR, writing in the Thornhill Radio Amateur Club (TRAC) *Bulletin*, asks,

Where were you on November 10, 1979? I know where I was: heading home at 2330 after a long shift driving a cab to and from Pearson Airport. I noticed the orange glow to the west, and wondered about it. However, I was much too tired to really care. I continued home and went to bed. Next morning the TV was full of the news of the train derailment in Mississauga. When it was announced that the train contained highly toxic chlorine gas, the realization set in. Fortunately I lived east of Dixie Road, so I had a little time to find a place for my family in case we had to leave the area.

"That came on November 12. My family went to a friend's house in Malton. I remember the reception centres where thousands had to go. As a Malton-based taxi owner I drove in and out of the area with workers, and we had to wear masks below Eglinton Avenue. I'll never forget the strange sensation of driving on streets that were completely empty except for the news camera crews that were all over the place. At the time it seemed like a miracle that 250,000 people had been evacuated without looting or panic.

"Let's hope it never happens again. But let's be ready if it does. Ours is a hobby that can and does save lives and spreads goodwill around the town and the world. Remember the local ARES nets and the many who give time to run them."

ALLOCATING SCARCE RESOURCES

Recently we had a discussion in Kingston ARES regarding the allocation of our personnel and equipment in an emergency. In some types of emergency, we speculated, the demand for communications assistance from a number of emergency response agencies could very well exceed what could be provided by our ARES members. With several agencies demanding that emergency stations be established at various locations, which ones should get priority? And who should decide?

The assistance available from our ARES group is described in the emergency plans of several area municipalities as well as plans of agencies such as Red Cross and the provincial health unit. None of these says anything about priorities. We agreed that it should be the responsibility of the Emergency Coordinator (EC) to decide where his or her resources should be used. Before deciding, the EC should obtain as much information as possible on the needs of each agency. In case of doubt, the EC should consult with the group responsible for control of relief efforts. This would normally be the Municipal Emergency Operations Control Group, led by the head of a municipal council. The EC should also determine what help, if any, to expect from neighbouring ARES groups. The EC can

Field Organization Reports July 1992

CRRL Section Emergency Coordinator Reports

Reports were received from the following. Total ARES membership is currently 1053:

Reporting	ARES Members
VE3GT	543
VE7HJS	158

CRRL Section Traffic Manager Reports

Call	Orig	Rcvd	Sent	Dlvd	Total
VE1YS	0	16	26	0	42
VE1BTV	0	17	18	0	35
VE1VAR	0	13	7	0	20
VE1DLC	1	3	1	2	7
VE3ORN	1	66	66	6	139
VE3GSQ	0	88	49	0	137
VE3DVE	1	34	52	2	89
VE3GNW	0	41	41	3	85
VE3CYR	1	66	15	0	82
VE3HZQ	2	21	45	1	69
VE3AJN	0	36	20	2	58
VE3GT	0	16	34	0	50
VE3NVJ	4	14	18	8	44
VE3WV	1	38	4	1	44
VE3AAU	0	12	19	2	33
VE3MNI	3	7	13	3	26
VE3BDM	0	6	18	1	25
VE3LPM	0	8	14	1	23
VE3SB	0	9	11	1	21
VE3KXB	0	5	7	0	12
VE3FS	2	3	5	0	10
VE3DBG	0	0	6	0	6
VE3BAJ	0	1	3	1	5
VE4JR	0	57	21	2	80
VE5KZ	5	27	22	3	57
VE5JML	0	5	0	0	5
VE6XG	5	19	9	9	42
VE6CE	8	9	14	2	33
VE7BNI	28	182	280	53	543
VE7ANG	0	75	73	4	152
VE7BCL	0	74	13	1	88
VECCJ	3	30	27	3	63
VE7FB	0	26	19	9	54
VE7XA	0	18	25	7	50
VE7FME	0	27	13	0	40
VE7EJU	0	12	11	0	23
VE7GDS	1	12	3	7	23
VE7FLY	0	8	10	0	18
VE7EGM	0	8	6	2	16
VE7BCF	2	9	3	0	14
VE7FRZ	2	8	3	0	13
VE7BPO	4	3	6	0	13
VE7WI	1	4	6	0	11
VE7DJ	3	4	3	0	10
VE7ALV	1	7	1	1	10
VE7BZI	1	3	1	1	6
VE7VO	0	2	3	0	5
VE7CZW	0	4	1	0	5
VE7BUU	0	1	1	0	2

National Traffic System

Net (Mgr)	Sess	QNI	QTC
APN (VE1YS)	29	101	–
KTN (VE3AJN)	13	116	13
NPN(VE3NDI)	31	453	24
OLN (VE3POJ)	30	844	31
OPN (VE3AJN)	31	564	205
OQN-D (VE3ORN)	29	128	30
OQN-E (VE3CYR)	31	128	62
OQN-L (VE3GSQ)	28	67	18
MEPN (VE4LB)	31	949	19
MMWX (VE4TE)	31	532	17
SEPN (VE5CJ)	31	1143	9
BCEN (VE7BCL)	31	1149	473

Brass Pounders' League

This listing is available to amateurs who report to their SM a traffic total of 500 or a sum of originations and delivery points of 100 or more for any calendar month. All messages must be handled on amateur frequencies, using standard ARRL-CRRL form, within 48 hours of receipt.

BPL: None this month

Public Service Honour Roll

(1991 Revision) This listing is for amateurs whose public service performance during the month indicated qualifies for 70 or more points in the following eight categories (as reported to their SM).Maximum points per category: (1) Checking into a public service net using any mode, 1 point each, maximum 60; (2) Acting as a Net Control Station (NCS) for a public service net using any mode, 3 points each time, maximum 24; (3) Performing assigned liaison between public service nets, 3 points each time, maximum 24; (4) delivering a formal message to a third party, 1 point each, no maximum; (5) Originating a formal message from a third party, 1 point each, no maximum; (6) Serving as a CRRL SM or field appointee, 10 points for each office or appointment, maximum 30; (7) Participating in a communications network for a public service event, 10 points each event, no maximum; and (8) Providing and maintaining an automated digital system that handles messages in standard ARRL-CRRL format, 30 points. Those qualifying for Public Service Honour Roll 12 consecutive months, or 18 months out of 24, will earn a special certificate.

PSHR: VE3ORN (145), VE3GSQ (138),VE3GNW (131), VE3AJN (130), VE3BDM (129), VE3CYR (129),VE3HZQ (111), VE3GT (103), VE3LPM (94) VE3FS (78), VE4LB (77)

Service and Specialized Nets

Independent Net Managers: Please send your reports to CRRL, Box 56, Arva, ON N5Y 4J9.

Net (Mgr)	Sess	QNI	QTC
ONTARS	31	11,507	0
GBN (VE3WV)	28	80	8
GBSSN (VE3WV)	28	80	27
Aurora 1 (VE4AHG)	29	969	8
Aurora 2 (VE4FP)	31	1376	2
Prairie WX (VE5EX)	30	682	0
Sask ARES (VE5FY)	4	161	0
Sask 2-Metre (VE5HG)	31	834	3
MJARC 2-Metre (VE5JJP)	30	430	0
Saskatoon 2-Metre (VE5DN)	29	289	0

then assign operators and equipment to provide the most effective communications assistance in the emergency.

MOBILE COMMUNICATIONS CENTRES

Slowly but surely, more ARES groups are obtaining and equipping mobile emergency communications vehicles. One such vehicle, owned by Terrace Zone of the BC Provincial Emergency Program (PEP), is described in the bulletin, *PEP Talk*:

"With the support of the City of Terrace and the Provincial Emergency Program, Terrace Amateur Radio operators, under Kim Olfert, VE7DZV, purchased a 1980 GMC van two years ago. The van contains three fixed VHF radios for local or repeater use, two HF radios for long-range use, and a fixed CB radio for local use. The antenna complement includes several rolled wire dipoles, fixed roof mounts, and an all-band HF-capable antenna mounted on the rear of the van.

"Electrical power is provided by a large industrial type lead-acid battery capable of running several radios for many hours. The operator also has the option of running an external gasoline generator to supplement the battery.

"Contacts can be made throughout the province and the world," says Olfert. Radio communication is possible on commercial as well as on amateur frequencies thus ensuring good operating flexibility.

"Although the mobile communications van has yet to be called on in an emergency, it has served to raise awareness of the importance of emergency planning.

"Olfert has displayed the unit at local fairs and trade shows. Next February it will be used during the BC Winter Games to provide communication links between Kitimat and a ski area west of Terrace. However, should a major disaster strike, the van and the fixed communication station at the Terrace City Hall stand ready to provide reliable amateur radio communications for the city and surrounding communities."

COMMERCIAL CERTIFICATES

John Avery VE1IW is District "D" Coordinator for the New Brunswick Emergency Measures Communications Group (EMCG). He raises the question of ARES members obtaining commercial certificates. Here is what John tells us they did in Fredericton:

"This past winter I attended an Emergency Communications course at the Emergency Preparedness College in Arnprior, Ontario. The course was about the planning side of an Emergency Operations Centre, rather than on operating a radio or other communications device.

"As the EMCG "D" District Coordinator, responsible for the operation of the Amateur Radio Communication Centre at EMO headquarters, I thought it would be a good idea for each of our operators to have an ROR—a Radiotelephone Operator's Restricted Certificate (Land). There is also an ROR for Air and another for Marine. This ROR, issued by DOC, allows the holder to operate a radio in another service.

"After returning from Arnprior, I mentioned running an ROR course to Jim Wade, VE1DH. He took me up on this immediately. He would put everything together and be happy to do the lecturing. The course was held on a Saturday. Jim lectured on Emergency Communications, and after lunch, the class studied DOC's RIC-22, Issue 1. After 20 minutes of study, the class wrote the 25-question examination. Of the 25 amateurs who wrote the exam, 25 now hold an ROR certificate.

"Our thanks to Jim, from Fredericton Amateur Radio Club and EMCG members, for his help." —*Bob Boyd, VE3SV*

ARES is the CRRL-sponsored Amateur Radio Emergency Service. This column appears in both The Canadian Amateur *and* QST Canada. *ARES members, and particularly ECs, are invited to submit material they wish to share. Bob Boyd, VE3SV, will incorporate this material into future columns, with the aim of helping us serve our community and our nation better, should disaster strike. —Editor* ■

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IC-751A 1595
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IC-725 949

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PS-35 249
PS-55 269

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FT-1000D 4495

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FT-747GX 849

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Now that you're back from summer holidays and the nights are turning cooler, you'll want to get into the ham shack and give your system a full check-out.

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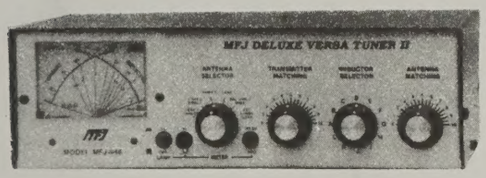
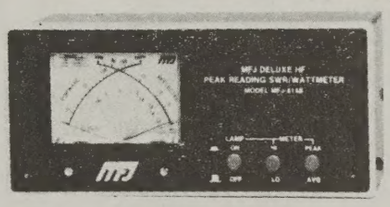


MFJ-948 Deluxe Versa Tuner II

(same as 949D but with no dummy load)

$136 *cash* **$139** *credit card*



MFJ-815B SWR/Wattmeter

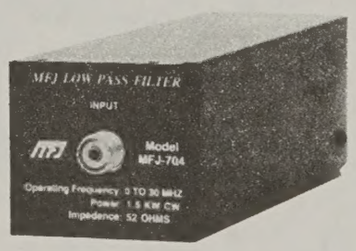
Simultaneously read peak or average forward and reflected power and SWR with this lighted meter (12 VDC req'd). Covers from 1.8 to 30 MHz.

MFJ-815B HF SWR/Wattmeter

$78 *cash* **$80** *credit card*

MFJ-704

The MFJ-704 handles full legal power and reduces TVI caused by harmonics in the TV bands. Works over entire HF operating range from 1.8 to 30 MHz.



MFJ-704 Low Pass Filter

$45 *cash* **$46** *credit card*

All orders add $5.00 shipping and sales taxes where applicable.

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ICOM Unveils the New IC-728!

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More Clarity!

All other radios in this price class use double conversion circuitry. ICOM uses more advanced **Triple Conversion** technology because it improves incoming signal quality and suppresses interference better. And a **Noise Blanker** reduces pulse-type noise interference instantly!

More Selectivity!

You won't find **PassBand Tuning** on some radios at twice the price! PBT is the most effective interference rejection system ever developed. It lets you narrow the IF passband width to cut out nearby signals and zero in on just the one you want to hear.

More Flexibility!

High-performance **AT-160 Antenna Tuner** (opt.) detaches for mobile operation.

More Punch!

ICOM's dynamic **Speech Compressor** increases the transmitter's output signal strength. This gives you the power to punch through when the bands are crowded or conditions are less than perfect.

More Speed!

Band Stacking Register automatically snaps you back to the last frequency and mode you were using — perfect for contesting, multibanders. **Direct Digital Synthesis,** gives you fast T/R switching for digital modes. **DDS** also improves your carrier-to-noise ratio by blocking interference, and it gives you the fast switching times you need for packet radio.

More Value!

We invite you to compare the IC-728 with any other HF. See how much you would pay for another transceiver with all of these performance features!

	ICOM IC-728		
Triple Conversion	✓		
Passband Tuning	✓		
DDS	✓		
Speech Compressor	✓		
Sugg. Retail Price*	$1,099		

* AT-160 Antenna Tuner is priced separately.

More Audio! Low-noise front-end technology means high sensitivity. A sharp IF and clear audio amplifier combine for excellent sound reproduction.

More Mobile! The IC-728 is more than a radio — it's a *system*. For example, the optional AT-160 ANTENNA TUNER can be "built-on" (it's not built-in), for optimal base station operation. Remove it, and you have a supercompact, light weight unit for mobile use, field days, etc. The bright LCD display is easy to see in vehicles (fluorescents aren't), and its superior noise blanker makes auto electrical noise a problem of the past!

And Even More! All-band, all-mode,† general coverage receiver, 26 memory channels, 3 types of scanning, plug-in (solderless) CW filters... plus the same superior quality and reliability you've come to expect with every ICOM transceiver.

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